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### Journal

Maternal and Child Health Journal, 19(7)

### Authors

Kazmerski, Traci  
McCauley, Heather  
Jones, Kelley  
[et al.](#)

### Publication Date

2015-07-01

### DOI

10.1007/s10995-014-1653-2

Peer reviewed



# HHS Public Access

Author manuscript

*Matern Child Health J.* Author manuscript; available in PMC 2023 November 13.

Published in final edited form as:

*Matern Child Health J.* 2015 July ; 19(7): 1490–1496. doi:10.1007/s10995-014-1653-2.

## Use of Reproductive and Sexual Health Services Among Female Family Planning Clinic Clients Exposed to Partner Violence and Reproductive Coercion

**Traci Kazmerski**<sup>✉</sup>,

Children's Hospital of Pittsburgh of UPMC, 4401 Penn Ave. AOB 3rd Floor, Suite 3300, Pittsburgh, PA 15224, USA

Department of Pediatrics, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

**Heather L. McCauley,**

Children's Hospital of Pittsburgh of UPMC, 4401 Penn Ave. AOB 3rd Floor, Suite 3300, Pittsburgh, PA 15224, USA

Department of Pediatrics, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

**Kelley Jones,**

Department of Pediatrics, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

**Sonya Borrero,**

Division of General Internal Medicine, University of Pittsburgh, Pittsburgh, PA, USA

VA Pittsburgh Center for Health Equity Research and Promotion, Pittsburgh, PA, USA

**Jay G. Silverman,**

University of California San Diego School of Medicine, San Diego, CA, USA

**Michele R. Decker,**

Johns Hopkins School of Public Health, Baltimore, MD, USA

**Daniel Tancredi,**

University of California Davis School of Medicine, Sacramento, CA, USA

**Elizabeth Miller**

Children's Hospital of Pittsburgh of UPMC, 4401 Penn Ave. AOB 3rd Floor, Suite 3300, Pittsburgh, PA 15224, USA

Department of Pediatrics, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

### Abstract

To examine the associations of recent intimate partner violence (IPV) and reproductive coercion (RC) with frequency of use of reproductive and sexual health services, a cross-sectional survey was administered to 16–29 year old women seeking care in five family planning clinics (n = 1,262). We evaluated associations of recent experiences of IPV, RC, or both IPV and RC with recent care seeking for pregnancy testing, emergency contraception, and sexually transmitted

<sup>✉</sup> Traci.kazmerski@chp.edu .

infection testing using multinomial logistic regression. Sixteen percent of respondents reported IPV and 13.5 % reported RC in the past 3 months. Four percent of all respondents reported both IPV and RC.

Recent RC without IPV was associated with increased odds of seeking one (AOR = 2.0, 95 % CI 1.3–2.9) or multiple pregnancy tests (AOR = 2.3, 95 % CI 1.2–4.5), multiple STI tests (AOR = 2.5, 95 % CI 1.5–4.1), or using emergency contraception once (AOR = 2.6, 95 % CI 1.2–5.8) or multiple times (AOR = 2.2, 95 % CI 1.7–2.7). Recent IPV without RC was associated with increased odds of seeking one (AOR = 1.4, 95 % CI 1.1–1.7) or multiple pregnancy tests (AOR = 2.2, 95 % CI 1.4–3.2) and using emergency contraception once (AOR = 1.6, 95 % CI 1.3–2.0). The combined effect of recent IPV and RC increased the odds of seeking multiple pregnancy tests (AOR = 3.6, 95 % CI 3.3–3.8), using emergency contraception multiple times (AOR = 2.4, 95 % CI 1.5–4.1) and seeking STI testing once (AOR = 2.5, 95 % CI 1.6–3.9) or multiple times (AOR = 2.9, 95 % CI 1.02–8.5). Frequent requests for pregnancy and STI testing and emergency contraception among young females seeking care may be an indicator of greater risk for recent RC, alone and in combination with IPV.

### Keywords

Intimate partner violence; Adolescent dating violence; Reproductive coercion; Sexual violence; Physical violence; Care-seeking patterns

### Background

One-third of American women have experienced violence by an intimate partner in their lifetime according to a recent national survey. The majority (69 %) of the approximately 42 million women who reported intimate partner violence (IPV) had their first experience before age 25. Additionally, in this same sample, 9 % of American women (10.3 million) have reported ever experiencing reproductive coercion (RC), or intimate partners' attempts to control a woman's reproductive choices [1].

These statistics confirm findings from previous studies [2, 3], including the extent to which IPV disproportionately affects adolescents and young adults [4–6]. Furthermore, IPV and RC have been associated with numerous negative physical, sexual, and mental health outcomes including substance use, unhealthy weight control behaviors, sexual risk behaviors, chronic pain, unintended pregnancy, poorer pregnancy outcomes, depression, and suicidality [4, 7–11]. Clinical settings have been recognized as strategic sites for IPV identification and intervention [12, 13].

Prior studies have demonstrated a link between IPV and health care utilization [14, 15] and have found a higher prevalence of IPV and RC in family planning and related women's health settings compared to the general population [16, 17]. This may be related to increased reproductive and sexual health concerns associated with IPV and RC, such as need for emergency contraception, pregnancy testing or sexually transmitted infection (STI) testing or treatment [18]. Identifying care-seeking patterns in the reproductive health clinic setting may lead to strategies that better identify and assist those at highest risk for IPV and/or

RC. This study examines the associations of recent IPV and RC with STI and pregnancy testing and emergency contraception use among clients seeking services at family planning clinics. We hypothesized that recent IPV and RC would be associated with use of these reproductive/sexual health services even once in the previous 3 months, with an even stronger association with more frequent use of such services (twice or more in the past 3 months).

## Materials and Methods

### Study Sample and Procedures

The current study uses cross-sectional survey data that served as baseline data for an intervention study. Participants included English- and Spanish-speaking female ages 16–29 years seeking care in five family planning clinics in Northern California between August 2008 and March 2009. Upon arrival to a clinic, females seeking any health services were screened for age eligibility by clinic staff and referred to research staff trained to conduct this study with utmost care for women’s privacy and safety. The research staff approached women about their interest in hearing about a women’s health study (women with males accompanying them were only approached later when alone in a clinical space). Eligible women interested in participating were escorted to a private area in the clinic for consent and survey administration. As participants were receiving confidential services, parental permission for participation was waived for minors.

Data were collected via Audio Computer Assisted Survey Instrument, a self-administered computer program that allows participants to complete surveys on a laptop computer with questions read aloud through headphones. Each participant received a violence-related resource card and a \$15 gift card to thank her for her time. All materials were provided in English or Spanish based on patient preference. All study procedures were reviewed and approved by Human Subjects Research Committees at the University of California Davis, Harvard School of Public Health, University of Pittsburgh and by the Planned Parenthood Federation of America; the data were protected with a federal Certificate of Confidentiality.

Eligible female clients ( $n = 1,479$ ) were recruited, and 1,319 agreed to complete the survey, resulting in a participation rate of 89 %. Primary reasons for non-participation were lack of time and plans to move away from the area in the near future; these individuals were disqualified based on the need for follow-up survey for the parent study. For the purpose of this analysis, women reporting never having sex ( $n = 31$ ) and those who were missing data on RC or IPV measures ( $n = 26$ ) were removed from the sample resulting in an effective sample size of 1,262 (85 % of eligible clients).

### Survey Measures

Single items assessed demographic characteristics including age, race/ethnicity, education level, and nativity (born in the U.S. or not). Intimate relationships were defined as “your sexual or dating relationships.” Recent experiences (past 3 months) of IPV were assessed using four items modified from the Conflict Tactics Scales-2 (CTS-2) [19] and Sexual Experiences Survey, one for physical violence (“hit, pushed, slapped, choked or otherwise

physically hurt by someone you were dating or going out with”) and three for sexual violence (“used threats to make you have sex,” “used force to make you have sex,” and “insisted on having sex when you didn’t want to”) [20]. Any affirmative response was coded as recent IPV (Cronbach alpha = 0.58).

Recent experiences (past 3 months) of reproductive coercion (RC) were assessed via nine questions described elsewhere [7] such as “Has someone you were dating or going out with ever ...told you not to use any birth control (like the pill, shot, ring, etc.)?” or “taken your birth control (like pills) away from you or kept you from going to the clinic to get birth control so that you would get pregnant?” Reproductive coercion was defined as a positive answer to any of these items (Cronbach alpha = 0.71).

Pregnancy testing, use of emergency contraception, and STI testing were assessed via self-reported items asking if the client had sought each service once, two or more times, or not at all in the past 3 months, to incorporate frequency of service use. Statistical Analysis

Accounting for design effects arising from the clustering of patients within clinics, statistical analyses procedures for clustered survey data were used with significance set at alpha = 0.05 [21, 22]. Unadjusted associations between recent IPV and RC and self-reported recent pregnancy testing, use of emergency contraception, and sexually transmitted infection testing were examined via Wald log-linear Chi square tests. Multinomial logistic regression models for clustered survey data were constructed to assess the associations of experiencing recent IPV only, RC only, or both IPV and RC with recent care-seeking behaviors, adjusting for demographic characteristics.

Statistical analyses were conducted using SAS Version 9.3 (SAS II; SAS, 9 ed., SAS Institute, Cary, NC, USA; 2003).

## Results

The mean age of the sample was 21.7 years (SD = 3.47) (Table 1). Consistent with the location of family planning clinics in neighborhoods serving communities of color, over three quarters of the sample identified themselves as non-White, with 16 % of participants not born in the United States. Sixty-five percent reported being in a serious relationship, married or cohabiting.

Recent IPV was reported by 16.3 % of women while recent RC was reported by 13.5 % of women in the sample. Almost one in twenty (4.4 %) women in the total sample reported both IPV and RC, 11.9 % reported IPV only, and 9 % reported RC only. Approximately a third (35 %) of women reporting IPV also reported a history of reproductive coercion, while 15 % of those with no history of IPV reported RC [7]. One in seven participants (14.3 %) reported seeking pregnancy testing two or more times in the past 3 months. Ten percent of the sample reported seeking emergency contraception two or more times and 5.6 % of the sample reported seeking STI testing two or more times in the past 3 months.

Care seeking behaviors differed by recent IPV or RC exposures (Table 2). Compared to those not reporting recent IPV, those experiencing recent IPV were more likely to seek two

or more pregnancy tests (22 vs. 13 %;  $p = 0.01$ ) and have used emergency contraception two or more times (14 vs. 10 %;  $p = 0.045$ ) in the past 3 months. Compared to those not reporting recent RC, women with a positive recent history of RC were more likely to seek emergency contraception two or more times (17 vs. 10 %;  $p = 0.01$ ) and STI testing two or more times (11 vs. 5 %;  $p = 0.045$ ).

Compared to women who reported neither IPV nor RC, recent RC in the absence of IPV was associated with twofold or greater increased odds of recently seeking one pregnancy test (AOR = 2.0, 95 % CI 1.3–2.9), two or more pregnancy tests (AOR = 2.3, 95 % CI 1.2–4.5), and two or more STI tests (AOR = 2.5, 95 % CI 1.5–4.1) (Table 3). Recent RC in the absence of IPV was also associated with increased odds of using emergency contraception once (AOR = 2.6, 95 % CI 1.2–5.8) and two or more times (AOR = 2.2, 95 % CI 1.7–2.7). Recent IPV in the absence of RC was associated with increased odds of seeking one pregnancy test (AOR = 1.4, 95 % CI 1.1–1.7), two or more pregnancy tests (AOR = 2.2, 95 % CI 1.4–3.2), and using emergency contraception once (AOR = 1.6, 95 % CI 1.3–2.0). The combined effect of both recent IPV and reproductive coercion increased the odds of seeking two or more pregnancy tests greater than threefold (AOR = 3.6, 95 % CI 3.3–3.8). These women also had increased odds of using emergency contraception two or more times (AOR = 2.4, 95 % CI 1.5–4.1) and seeking STI testing once (AOR = 2.5, 95 % CI 1.6–3.9) or two or more times (AOR = 2.9, 95 % CI 1.02–8.5).

## Discussion

This study documents an association between reproductive health care seeking patterns and recent physical and sexual violence victimization by an intimate partner (IPV) as well as RC among young women attending family planning clinics. Women who experienced RC in the absence of IPV had higher odds of seeking pregnancy and STI testing and using emergency contraception; similarly, women who experienced IPV in the absence of RC had higher odds of seeking pregnancy testing and using emergency contraception. The combined effect of recent RC and recent IPV was associated with even higher odds of seeking multiple pregnancy tests, one or multiple STI tests, or using emergency contraception two or more times in the previous 3 months. These findings support literature indicating that women who have experienced abuse seek care more frequently than non-abused women in resource-rich settings [14–18]. This work is the first to link RC and IPV to specific reproductive and sexual care seeking in a clinic-based population.

The high prevalence of recent (past 3 months) physical and sexual IPV found in the study (approximately 16 % of women and girls ages 16–29 years) is consistent with prior studies that have documented high rates of violence in intimate relationships among female clients presenting for sexual and reproductive health services [16–18, 23]. Similar to IPV, the prevalence of recent RC in this clinic-based sample (13.5 %) is higher than national estimates of lifetime risk (9 %) [1]. Women who recently experienced both RC and IPV comprised 4.4 % of the total sample, representing 27 % of all women reporting recent IPV and 33 % of all women reporting recent RC. This is not surprising given the association of RC with physical and sexual IPV found in previous studies and the clear reproductive health consequences of exposure to both IPV and RC, including unintended pregnancy [24–28].

Prior studies completed in resource-rich settings such as the United States have demonstrated a link between IPV and increased healthcare utilization overall, but specific care-seeking patterns and use of reproductive and sexual health services among women experiencing RC and/or IPV have not been examined previously. In a large population-based study, Brown et al. [29] demonstrated that women reporting lifetime IPV were twice as likely to report receiving HIV testing and breast examinations. Decker et al. [30] found that girls with exposure to physical dating violence were significantly more likely to also report having had STI testing. The frequent pregnancy and STI testing as well as use of emergency contraception reported by women in this study confirm the known associations between reproductive health service use and IPV. Notably, this is the first study to demonstrate a significant association between recent RC alone and reproductive health service use.

Recent American Congress of Obstetricians and Gynecologist (ACOG) guidelines recommend universal screening and brief counseling interventions for IPV and RC by health care providers for all adolescent and adult women at routine intervals [31, 32]. The results of this study support these recommendations and highlight the need for targeted assessment of female clinic patients seeking specific reproductive health services. In particular, multiple recent visits for pregnancy or STI tests and/or emergency contraception should be considered clinical ‘red flags’ for recent IPV or RC, as these experiences likely increase exposure to unprotected intercourse and other sexual risk. Clients seeking these services should receive targeted assessment through use of specific scripts to discuss sexual and reproductive coercion integrated into the clinic visit [33]. Screening for physical or sexual violence (including questions about whether she feels safe in the relationship) may not identify RC, and RC occurs in the absence of physical or sexual IPV. While RC is likely to be among many types of controlling behaviors experienced by women in abusive relationships, health care providers should inquire specifically about RC, because they are uniquely positioned to address RC and offer harm reduction strategies (such as use of an IUD to minimize partner influence on contraceptive decision making).

This study also supports the call for continued development of clinical interventions for young women exposed to or at risk for experiencing IPV and RC [34, 35]. Protocols should include provider education and training on these topics, effective counseling on harm-reduction strategies and safety planning, and connections to IPV resources and advocacy services for long-term, expert support for victims. Given the prevalence of IPV and RC present among their clients, reproductive health clinics are likely to serve as prime locations for implementation and evaluation of effectiveness of such protocols [36].

This study has several limitations. The cross-sectional nature of the investigation precludes conclusions about the timing of associations between IPV, RC and reproductive care seeking and may be missing other unmeasured confounders. Longitudinal studies are needed to better understand causal and temporal relationships among IPV, RC, exposure to risky sexual behaviors, and health care seeking. Findings from this sample from five family planning clinics in Northern California with similar demographics across clinics also cannot be generalized to all family planning clinic clients. Furthermore, the link between IPV and greater health service utilization has not yet been demonstrated in resource-constrained

countries; further work is needed to understand how IPV and RC influence health service uptake on a global level.

Universal screening and brief counseling in clinical settings for IPV and RC should be considered a priority, especially in the setting of family planning and reproductive care seeking. Targeted assessment of family planning clinic clients who exhibit clinical “red flags” such as multiple recent STI or pregnancy tests and/or use of emergency contraception is warranted. Development of effective intervention programs targeting IPV and RC is imperative to improve the health care of young, reproductive-age women.

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**Table 1**

## Demographics and care seeking

Characteristic	Frequency (n = 1,262) % (n)
Race	
Asian	5.4 (68)
Black or African American	27.9 (352)
Hispanic or Latina	30.0 (378)
Native Hawaiian/Pacific Islander/American Indian/Alaskan Native	5.7 (72)
White	22.6 (285)
Multiracial/other	8.5 (107)
Age, mean (SD)	21.7 (3.47)
Education	
Less than high school diploma	22.5 (284)
High school diploma or GED	34.2 (431)
Some college	32.5 (410)
College degree or higher	10.9 (137)
Relationship status	
Single	29.3 (370)
Dating more than 1 person	3.9 (49)
In a serious relationship	57.8 (730)
Married	9.0 (113)
Nativity	
Born in U.S.	83.9 (1,059)
Born outside U.S.	16.1 (203)
Past 3 months experience	
	% (95% CI, n) <sup>a</sup>
Recent IPV	
Yes	16.3 (11.4–21.2, 206)
No	83.7 (78.8–88.6, 1,056)
Recent reproductive coercion	
Yes	13.5 (10.6–16.4, 170)
No	86.5 (83.6–89.4, 1,092)
Care seeking behaviors	
Pregnancy test	
None	57.1 (50.1–64.1, 721)
Once	28.5 (23.9–33.2, 360)
Two or more times	14.3 (10.6–18.1, 181)
Emergency contraception	
None	69.1 (62.9–75.3, 872)
Once	20.3 (16.7–23.9, 256)
Two or more times	10.6 (7.4–13.8, 134)
STI test	

Characteristic	Frequency (n = 1,262) % (n)
None	78.9 (73.1–84.7, 996)
Once	15.5 (11.8–19.2, 196)
Two or more times	5.5 (2.1–9.0, 70)

<sup>a</sup>Wald confidence intervals were used to account for clustered survey design effects, which ranged from 1.18 to 3.62

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**Table 2**  
Recent care seeking by recent intimate partner violence and reproductive coercion

	Pregnancy test			Emergency contraception			STI test		
	% No (95% CI) <sup>a, b</sup>	% Once (95% CI) <sup>a, b</sup>	% Two or more times (95% CI) <sup>a, b</sup>	% No (95% CI) <sup>a, b</sup>	% Once (95% CI) <sup>a, b</sup>	% Two or more times (95% CI) <sup>a, b</sup>	% No (95% CI) <sup>a, b</sup>	% Once (95% CI) <sup>a, b</sup>	% Two or more times (95% CI) <sup>a, b</sup>
Intimate partner violence									
Yes (n = 206)	47.1 (35.8–58.4)	30.6 (22.4–38.8)	22.3 (13.7–31.0)	63.6 (57.5–69.7)	22.3 (17.3–27.4)	14.1 (6.0–22.2)	70.4 (52.2–88.6)	20.4 (9.6–31.2)	9.2 (0.2–18.3)
No (n = 1,056)	59.1 (52.4–65.8)	28.1 (23.1–33.1)	12.8 (9.1–16.4)	70.2 (63.8–76.6)	19.9 (15.5–24.3)	9.9 (7.6–12.3)	80.6 (75.6–85.5)	14.6 (11.5–17.7)	4.8 (1.6–8.1)
Chi square <i>p</i> value <sup>c</sup>	0.01			0.045			0.39		
Reproductive coercion									
Yes (n = 170)	41.8 (32.4–51.2)	35.3 (30.9–39.7)	22.9 (16.7–29.2)	55.3 (43.1–67.5)	27.6 (10.0–45.3)	17.1 (7.8–26.3)	67.6 (59.2–76.1)	21.2 (16.2–26.1)	11.2 (4.8–17.5)
No (n = 1,092)	59.5 (52.3–66.7)	27.5 (22.6–32.4)	13.0 (9.4–16.6)	71.2 (65.1–77.4)	19.1 (15.0–23.2)	9.6 (7.4–11.8)	80.7 (75.0–86.3)	14.7 (10.9–18.4)	4.7 (1.6–7.8)
Chi square <i>p</i> value <sup>c</sup>	0.050			0.01			0.045		

<sup>a</sup>Row percent

<sup>b</sup>Wald confidence intervals were used to account for clustered survey design effects, which ranged from 0.18 to 4.22

<sup>c</sup>Wald log-linear Chi square *p* value, accounting for clustering

Table 3

Odds of recent pregnancy testing, STI testing, and emergency contraceptive use by recent reproductive coercion and intimate partner violence

Exposure <sup>a</sup>	Pregnancy test			Emergency contraception			STI test		
	No AOR (95 % CI) <sup>b</sup>	Once AOR (95 % CI) <sup>b</sup>	Two or more times AOR (95 % CI) <sup>b</sup>	No AOR (95 % CI) <sup>b</sup>	Once AOR (95 % CI) <sup>b</sup>	Two or more times AOR (95 % CI) <sup>b</sup>	No AOR (95 % CI) <sup>b</sup>	Once AOR (95 % CI) <sup>b</sup>	Two or more times AOR (95 % CI) <sup>b</sup>
No RC/No IPV (n = 942)	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Yes RC/No IPV (n = 114)	Ref	<b>2.0 (1.3–2.9)</b>	<b>2.3 (1.2–4.5)</b>	Ref	<b>2.6 (1.2–5.8)</b>	<b>2.2 (1.7–2.7)</b>	Ref	1.3 (0.9–1.8)	<b>2.5 (1.5–4.1)</b>
No RC/Yes IPV (n = 150)	Ref	<b>1.4 (1.1–1.7)</b>	<b>2.2 (1.4–3.2)</b>	Ref	<b>1.6 (1.3–2.0)</b>	1.4 (0.9–2.0)	Ref	1.3 (0.6–2.9)	2.1 (0.7–6.6)
Yes RC/Yes IPV (n = 56)	Ref	1.4 (0.8–2.6)	<b>3.6 (3.3–3.8)</b>	Ref	0.9 (0.5–1.6)	<b>2.4 (1.5–4.1)</b>	Ref	<b>2.5 (1.6–3.9)</b>	<b>2.9 (1.02–8.5)</b>

Results in bold are statistically significant

<sup>a</sup>Categories are mutually exclusive

<sup>b</sup>Multinomial logistic regression procedures were used to estimate adjusted odds ratios (AOR) for seeking care once or two or more times compared to not at all, given recent RC and IPV exposure compared to those who did not experience RC or IPV; separate models were run for each care seeking category (pregnancy test, emergency contraception, STI test). Models accounted for the clustering of patients within clinics and statistically adjusted for patient race, age, education, relationship status, and whether or not they were U.S. born